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AUTHOR Berney, Tomi D.; Keyes, Jose
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ABSTRACT

The Computer Writing Skills for Limited English Proficient Students (Project COMPUGRAFIA.LEP), bilingual special education classes totalling 375 Spanish-speaking students at 10 elementary schools in the Bronx, is evaluated. The project proposed to assist site teachers in developing appropriate lesson plans and effective teaching techniques and offered teachers instruction in the teaching of computer-supported writing and career education. Through the use of interviews with school and project personnel, class observation, analysis of student attendance and achievement data, and a project director questionnaire, it was determined that Project COMPUGRAFIA.LEP met its objectives for staff and curriculum development. The program was also successful in getting the desired number of parents involved in training sessions to improve their English language skills. The program, however, was still unable to interest parents in bilingual and special education policies and procedures. The project did not meets its English-as-a-Second-Language or Native Language Arts objectives. (GLR)

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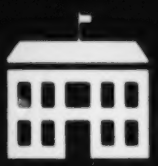

OREA Report

EVALUATION SECTION REPORT

COMPUTER WRITING SKILLS FOR LIMITED ENGLISH PROFICIENCY STUDENTS PROJECT COMPUGRAFIA.LEP

Grant Number G008710368

1988-89

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EVALUATION SECTION
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April 1990

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COMPUTER WRITING SKILLS FOR LIMITED ENGLISH PROFICIENCY STUDENTS PROJECT COMPUGRAFIA.LEP

Grant Number G008710368

1988-89

Prepared by
The Multicultural/Bilingual Education Evaluation Unit
Tomi Deutsch Berney, Evaluation Manager
Jose L. Keyes, Evaluation Consultant

New York City Board of Education
Office of Research, Evaluation, and Assessment
Robert Tobias, Director

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COMPUTER WRITING SKILLS
FOR LIMITED ENGLISH PROFICIENT STUDENTS
COMPUGRAFIA.LEP
1988-89

SUMMARY

- Project COMPUGRAFIA.LEP was fully implemented. During the 1988-89 school year, students received instruction in English as a Second Language, Native Language Arts, and career education subjects. The program provided staff development and parental involvement activities.

- The project achieved its objectives for staff and curriculum development and partially achieved its objectives for career education and parental involvement. Project COMPUGRAFIA.LEP did not meet the English as a Second Language or Native Language Arts objectives.

Computer Writing Skills for Limited English Proficient Students (Project COMPUGRAFIA.LEP) was an Elementary and Secondary Education Act (E.S.E.A.) Title-VII funded staff development program. In its second year of a three-year funding cycle, the program served 35 bilingual special education classes with 375 Spanish-speaking students at ten elementary schools in the Bronx. The project proposed to assist site teachers in developing appropriate lesson plans and effective teaching techniques and offered teachers instruction in the teaching of computer-supported writing and career education.

The participating students were in grades one through six. At least 60 percent were of limited English proficiency (LEP students); the others were English proficient (EP). These students received instruction in English as a Second Language (E.S.L.) and Native Language Arts (N.L.A.), computer-based skills, and career education. It offered staff and curriculum development and activities to promote parental involvement.

To evaluate this program, the Office of Research, Evaluation, and Assessment (OREA) interviewed school and project personnel as well as observed classes; and analyzed student attendance and achievement data and an OREA-developed project director questionnaire.

Project COMPUGRAFIA.LEP met its objectives for staff and curriculum development, which it had not done in the previous year. Also in contrast to 1987-88, the program was successful in getting the desired number of parents involved in training sessions to improve their English language skills. However, the program was still unable to interest parents in bilingual and special education policies and procedures. Therefore, it only partially achieved its objective for parental involvement.

The project did not meet its E.S.L. or N.L.A. objectives. It met one of the two career education objectives. However, a teacher brought attention to the fact that some students seemed to respond favorably to computer-based instruction.

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I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of Computer Writing Skills for Limited English Proficient Students (COMPUGRAFIA.LEP) for the year 1988-89. This was an Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded staff development program in its second year of a three-year funding cycle. The program operated in ten elementary schools in the Bronx. COMPUGRAFIA.LEP served 35 special education bilingual classes containing 375 students, at least 60 percent of whom were students of limited English proficiency (LEP students). Project resource specialists assisted site teachers in developing appropriate lesson plans and effective teaching techniques. The project also provided teachers with instructional units in computer-supported writing skills and career education. The project's non-instructional activities included curriculum and staff development as well as parental involvement.

HISTORY OF THE PROGRAM

The program selected sites with large numbers of special education students who had never received Title VII aid and whose administrations were willing to support the program. A more complete history of the program can be found in OREA's final evaluation report of 1987-88.

SETTING

Ten schools in the south and northeast Bronx participated in the program. South Bronx schools were in low-income areas with a large proportion of recent immigrants. Schools in the northeastern part of the borough were in low- to middle-income neighborhoods with a more stable population.

PARTICIPATING STUDENTS

The COMPUGRAFIA program served 375 LEP and English proficient (EP) Spanish-speaking special education students in grades one through six. At least 60 percent were LEP. Since the students lived in communities where communication was primarily in Spanish, they had very little opportunity to use English outside the classroom setting. Of the 350 students for whom both age and grade data were available, the largest numbers were in grades four and five. (See Table 1.) Overall, 40 percent of the students were over-age for their grade placement.

STAFF

The program staff consisted of a project director, a coordinator/resource specialist, a resource specialist, and a secretary. The project director, who held a Ph.D. in administration, was responsible for overseeing the program. The coordinator/resource specialist coordinated 16 teachers at five school sites, made site visits, and was involved in teacher training and curriculum development. She held a master's degree

TABLE 1

Number of Program Students by Age and Grade[a]

Age	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Total
7	1	4	1	1	0		7
8	0	11	11	3	0	0	25
9	0	7	22	13	1	0	43
10	0	1	10	44	14	0	69
11	0	1	4	43	46	2	96
12	0	0	0	1	46	36	83
13	0	0	0	0	5	21	26
14	0	0	0	0	0	1	1
TOTAL	1	24	48	105	112	60	350[b]
			Over-Age Students				
Number	0	9	14	44	51	22	140
Percent	0	37.5	29.2	41.9	45.5	36.7	40.0

Note. Outlined boxes indicate expected age range for grade.

[a]As of June 30, 1989.

[b]Data were missing for 25 students.

- Most students were in grades four and five.
- Forty percent of program students were over-age for their grade.

in bilingual education and computers and had a license in bilingual education.

The other resource specialist was in charge of 18 teachers at five schools and was also engaged in site visits, teacher training, and curriculum development. She held a master's degree in education and a license in bilingual special education. Both resource specialists spoke fluent English and Spanish.

DELIVERY OF SERVICES

The resource specialists visited classes to provide instructional support and follow-up training to teachers. They supplied teachers with a monthly packet of activities revolving around a central theme; the teachers were free to choose among these activities. The resource specialists provided model lessons to address teachers' needs and also monitored lesson plans, offering useful learning strategies and helping the site teacher to individualize the content of the lessons.

REPORT FORMAT

This report is organized as follows: Chapter II presents the evaluation methodology; Chapter III describes the implementation of the program and assess the implementation objectives; Chapter IV offers an analysis of outcome data; Chapter V gives conclusions based upon the results of the evaluation.

II. EVALUATION METHODOLOGY

EVALUATION QUESTIONS

This evaluation assessed two major areas: program implementation and outcomes. Evaluation questions included the following:

Process/Implementation

- What proportion of targeted classroom teachers participated in staff development sessions on instructional skills?
- What instructional units did resource specialists develop?
- What percentage of participating students' parents attended parent involvement sessions?
- What percentage of participating students' parents attended E.S.L. classes?

Outcomes

- Did the program select students according to specific criteria?
- What was the average gain on the English version of the Language Assessment Battery?
- What was the average gain on the Spanish version of the LAB?
- Did participating students learn about careers?
- Did participating students improve their computer-supported writing instruction skills?

EVALUATION PROCEDURES

Sample

The OREA consultant visited one target school, P.S. 66. He interviewed the program director, two resource teachers, and the school principal, and observed two COMPUGRAFIA.LEP classes, one in E.S.L. and one in N.L.A. OREA provided a student data form for each participating student. The project returned 350 completed forms.

Instruments

OREA developed interview and observation schedules as well as a questionnaire for the project director. Project personnel used OREA-developed data retrieval forms to report student attendance and achievement data.

Data Collection

Interviews and observations took place during the spring semester. The program received data forms and the project director questionnaire in March and returned them in June.

Data Analysis

OREA used the Language Assessment Battery to assess improvement in English proficiency.* Project COMPUGRAFIA.LEP students were tested at grade level each spring. Students' raw scores were converted to Normal Curve Equivalent (N.C.E.) scores, which have multiple advantages over other scoring methods. They are standard, normalized, and form an equal interval scale. ("Standard" indicates that the unit of measurement is a fraction of the standard deviation of the original distribution of raw scores; "normalized" refers to the fact that the scale is adjusted for the norm group so that its distribution has the shape of a normal distribution; and "equal interval scales" allow for legitimate aggregation or averaging of scores.) Project students' N.C.E.s indicated their standing in relation to the national average of 50.

To assess the significance of students' achievement in English, OREA computed a correlated *t*-test on LAB N.C.E. scores. The *t*-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

To insure representative achievement data, OREA included

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*The Language Assessment Battery (LAB) was developed by the Board of Education of the City of New York to measure the English-language proficiency of nonnative speakers of English in order to determine whether their level of English proficiency was sufficient to enable them to participate effectively in classes taught in English. Students scoring below the twenty-first percentile on the LAB are entitled to bilingual and E.S.L. services.

only those students who had been in the program for at least five months and had attended classes for at least 100 school days. OREA extrapolated to estimate full-year scores of late-arriving and early-exiting students.

Limitations

Since all LEP students are entitled to receive bilingual and E.S.L. services, OREA was unable to select an equivalent control group. However, the use of two sets of data, as outlined above, served in lieu of a control group.

III. EVALUATION FINDINGS: IMPLEMENTATION

COMPUGRAFIA.LEP provided students with instruction in E.S.L., N.L.A., and career education subjects. The project provided staff development services, curriculum development, and activities for parental involvement.

STUDENT PLACEMENT AND PROGRAMMING

Students with the most limited proficiency in English were placed in Bilingual Instructional Services I (BIS I); those who had already achieved some proficiency in English were placed in BIS II classes.

INSTRUCTIONAL ACTIVITIES

Instructional activities included E.S.L., N.L.A., and career education subjects.

English as a Second Language

The OREA field consultant observed an E.S.L. class at P.S. 66. The students, fourth and fifth graders, had visited the West End Symphony and were writing a letter to thank the orchestra for its invitation. The class composed sentences orally, the teacher wrote them on the board, and the students copied the sentences in their notebooks. The students used both English and Spanish in the classroom. The paraprofessional in the classroom did not participate in the lesson.

Native Language Arts

At P.S. 66 the field consultant observed BIS I class. Thirteen students were in attendance, with two teachers, both licensed in special education, and a paraprofessional (who left early). The lesson focused on cursive writing. The students and teachers wrote a paragraph on "Mi Mamá" on the chalkboard, the students writing something from their own perceptions. Each time a student wrote a sentence, the rest of the class applauded.

One teacher stated that classes frequently used a computer to aid learning. She said that the computer had helped one student's N.L.A. reading level rise three grades, so that the next semester he would be at grade level in a BIS II class.

Career Education Subjects

Each student selected a minimum of six performance objectives in career education from a list of more than 50. The selection was made by the teacher and the student, based on the student's needs and current abilities. This ensured that each student's interests were met and that the student could proceed at his or her own pace.

NON-INSTRUCTIONAL ACTIVITIES

The project proposed non-instructional implementation objectives in staff development, curriculum development, and parental involvement.

Staff Development

The program objective for staff development was:

- By the conclusion of the project period, all targeted classroom teachers will have participated in staff development sessions on the development of instructional skill areas using bilingual special education instruction approaches.

COMPUGRAFIA.LEP held 18 hours of teacher training in eight workshops from October to May. It scheduled two additional hours of training for June. These hours of staff development were offered jointly with another program, COMPUOCC.LEP.

Resource teachers visited target sites to provide instructional support and follow-up training to classroom teachers. A resource teacher visited each site teacher at least three times a month.

The resource teachers attended such training programs as the E.S.L. workshops offered monthly by the Division of Multilingual/Multicultural Education (DOMME), as well as workshops on technology in the classroom and on special education instructional approaches for selected student populations.

An institute in the summer of 1989 stressed mainstreaming perspectives. Program teachers were trained in such areas as the assessment process, networking, assessment agencies, planning and implementing instructional programs based on the assessment of student needs, developing curriculum based on student needs, and evaluating student performance. The summer institute aimed to develop skills in identifying students for mainstreaming by improving the clinical assessment of special education students

to take into account such factors as socioeconomic and family conditions. The institute also aimed to teach techniques for improving students' desire to learn, as well as their learning skills. This introduced a new focus for Project COMPUGRAFIA.LEP.

Project COMPUGRAFIA.LEP met its staff development objective.

Curriculum Development

The program objectives for curriculum development were:

- By the conclusion of the project period, the Title VII resource specialists will have developed subject matter-oriented instruction units and model lesson plans for teaching keyboarding, text editing, and word processing skills.
- By the conclusion of the project period, the Title VII resource specialist will have developed subject matter-oriented instructional units and model lesson plans for teaching career exploration, work readiness, and work study skills.

The resource teachers developed lessons plans on keyboarding, word processing, text editing, and the "dos and don'ts" of using the computer. They also developed lesson plans on career exploration, work readiness, and work study skills. Thus, the program met its objectives for curriculum development.

Parental Involvement

The program objectives for parent involvement were:

- By the conclusion of the project period, 50 percent of the parents of program students will have attended parent involvement sessions in the areas of bilingual education policies and procedures and special education policies and procedures.

- By the conclusion of the project period, 80 parents of program students will have participated in E.S.L. training sessions for the purpose of improving their own English language proficiency and are expected to maintain an attendance rate of 75 percent.

COMPUGRAFIA.LEP provided four workshops to program parents during the year. Thirty-one percent of the program parents attended parent involvement sessions, thus the project did not meet its first parent involvement objective. However, 85 parents maintained an attendance rate of 75 percent in program-sponsored E.S.L. classes; thus, the program met its second parent involvement objective.

IV. EVALUATION FINDINGS: OUTCOMES

ENGLISH AS A SECOND LANGUAGE

The evaluation objective for English language development was:

- Seventy percent of the participating LEP students will have significantly increased their English language proficiency as measured by the Language Assessment Battery (LAB) from the date of entering this project to the spring of 1989.

There were complete English LAB scores for 209 students. Only 89 students (43 percent) made gains. (See Table 2.) While for students in grades two, three, and six these gains were statistically significant ($p < .05$), the overall mean gain was not. Thus, COMPUGRAFIA.LEP did not meet the objective in E.S.L.

NATIVE LANGUAGE ARTS

The evaluation objective for Native Language Arts was:

- Seventy percent of the participating LEP students will have significantly increased their Spanish language proficiency as measured by the Spanish Language Assessment Battery (LAB) from the date of entering this project to the Spring of 1989.

Both pre- and posttest Spanish LAB data were available for 31 students. The overall mean loss was 3.7 (s.d. = 16.1). The percentage of students who made percentile score gains from pretest to posttest was 35. Thus, COMPUGRAFIA.LEP did not meet its N.L.A. objective. Here, it should be noted that complete data were available for only eight percent of the students.

TABLE 2

Pretest/Posttest N.C.E. Differences on the Language Assessment Battery, by Grade

Grade	Number of Students	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference Mean	Difference S.D.	t value	Percent of Students Making Gains
1	3	19.0	16.1	32.7	17.9	13.7	9.6	2.46	100
2	12	14.5	13.0	25.0	17.3	10.5	19.9	1.83*	67
3	24	19.3	12.4	23.9	7.2	4.6	12.4	1.81*	67
4	62	15.5	8.5	13.8	9.9	-1.6	10.3	-1.26	35
5	71	15.1	8.5	11.5	11.2	-3.7	12.2	-2.52	22
6	37	11.6	10.4	17.7	11.0	6.1	7.6	4.88*	65
TOTAL	209	15.1	9.9	15.8	11.9	.7	12.4	.79	43

*$p<.05$

- Overall, 43 percent of the students made gains.
- Students in grades two, three, and six showed significant gains on the LAB.

CAREER EDUCATION SUBJECTS

The evaluation objectives for career education subjects were:

- Seventy percent of the participating LEP students will have significantly improved their career skills in the areas of career exploration, work readiness, and work study skills.
- Seventy percent of the participating LEP students will have significantly improved their computer-supported writing skills in the areas of keyboarding, text editing, and word processing skills.

The project provided data on 206 students. Of these, 129 or 63 percent showed improved ability in six or more new skills in work readiness. Although it approached meeting it, Project COMPUGRAFIA.LEP failed to meet the first career education objective.

Data were available for 311 students in text editing. Of these, 268 students (86 percent) showed improved ability in six or more skills. The project, therefore, did meet the second career education objective.

V. CONCLUSIONS

This is the second year of the COMPUGRAFIA.LEP program. The program served 375 bilingual special education students, at least 60 percent of whom were LEP. Each of the 35 site classrooms involved in the program had functioning computers and other related hardware. Resource teachers, and other program and regional staff, regularly visited the program sites to provide training for site teachers. The program held curriculum and staff development activities as well as parental involvement programs.

The program met its objectives in staff and curriculum development and partially met its parental involvement and career education objectives. It did not meet its objectives in E.S.L. or N.L.A.

The selection of individual student performance objectives by teacher and student ensured that each student progressed at his/her own pace. The clinical assessment aspect of the 1989 summer institute provided a new direction for COMPUGRAFIA.LEP.